

Name: _____

at1110paper_practice_test (v10)

1. Expand the following expression into standard form.

$$(3x + 4)(7x - 8)$$

$$21x^2 - 24x + 28x - 32$$

$$21x^2 + 4x - 32$$

2. Factor the expression.

$$49x^2 - 36$$

$$(7x - 6)(7x + 6)$$

3. Expand the following expression into standard form.

$$(8x + 7)^2$$

$$64x^2 + 56x + 56x + 49$$

$$64x^2 + 112x + 49$$

4. Factor the expression.

$$x^2 - 11x + 28$$

$$(x - 4)(x - 7)$$

5. Solve the equation.

$$(2x + 3)(5x - 4) = 0$$

$$x = \frac{-3}{2} \quad x = \frac{4}{5}$$

6. Expand the following expression into standard form.

$$(2x - 9)(2x + 9)$$

$$\begin{aligned} & 4x^2 + 18x - 18x - 81 \\ & 4x^2 - 81 \end{aligned}$$

7. Solve the equation.

$$5x^2 + 27x + 59 = 2x^2 - 4x + 3$$

$$\begin{aligned} & 3x^2 + 31x + 56 = 0 \\ & (3x + 7)(x + 8) = 0 \\ & x = \frac{-7}{3} \quad x = -8 \end{aligned}$$

8. Solve the equation with factoring by grouping.

$$12x^2 + 15x + 8x + 10 = 0$$

$$\begin{aligned} & (3x + 2)(4x + 5) = 0 \\ & x = \frac{-2}{3} \quad x = \frac{-5}{4} \end{aligned}$$